(19) World Intellectual Property Organization International Bureau



(43) International Publication Date 8 January 2004 (08.01.2004)

(10) International Publication Number WO 2004/002303 A1

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM,

HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK,

LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL,

TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.

Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR), OAPI patent

(BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

- (51) International Patent Classification7: A61B 5/042, 5/06
- (21) International Application Number:

PCT/CH2002/000349

- (22) International Filing Date: 26 June 2002 (26.06.2002)
- (25) Filing Language:

English

(26) Publication Language:

English

- (71) Applicant (for all designated States except US): EN-DOSENSE S.A.R.L. [CH/CH]; Route de Satigny 42,
- CH-1217 Meyrin (CH).
- Published:

with international search report

NE, SN, TD, TG).

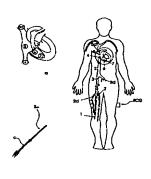
(72) Inventor; and

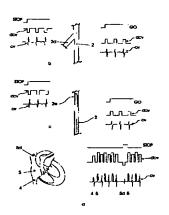
(75) Inventor/Applicant (for US only): VERIN, Vitali [RU/CH]; Rue de la Prairie 3, CH-1202 Genève (CH).

(74) Agent: FALTAS MIKHAIL, William; Route de Drize 68, CH-1227 Carouge (CH).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: CATHETERIZATION METHOD AND SYSTEM





(57) Abstract: The catheter is guided along a blood vessel of a patient by the bipolar electrode functioning as a mobile sensor on the catheter tip connected to the electronic unit to monitor the advance of the catheter and determine any modification of successive signals received from the bipolar electrode in order to detect any deviation of the catheter tip from the required path along the blood vessel and to deliver control signals comprising a GO signal, a STOP signal or an END signal to respectively enable, interrupt or terminate the advance of the catheter. The bipolar electrode moreover serves to verify the contact of the catheter tip with the wall of the heart cavity of the patient by creating impulses and detecting the appearance of corresponding induced signals on a surface cardiogram of the patient. The combination of the bipolar electrode on the catheter with the electronic unit provides a portable catheterization system particularly suitable for performing urgent cardiac catheterizations outside hospitals.